

## Release Prevention Compliance Measures Matrix - Addendum

This addendum provides additional information to assist UST inspectors in determining whether significant operational compliance has been achieved for a particular Regulatory Subject Area. Please note that the current federal regulatory framework does not necessarily require compliance with items presented in the “Hints/Inspection Tips” section. Individual states may choose to modify this Addendum to ensure it meets the state’s requirements and inspection procedures.

Although not all inclusive, this Addendum provides a cross-reference to items identified on the Release Prevention Compliance Measures form.

Regulatory Subject Area	Hints/Inspection Tips	Corresponding Release Prevention Measure #
	<p>Helpful resources to accompany inspection include:</p> <ul style="list-style-type: none"> <li>• State and federal regulations</li> <li>• Other EPA and state literature <a href="http://www.epa.gov/oust/pubs/index.htm">http://www.epa.gov/oust/pubs/index.htm</a></li> <li>• For internal lining inspections: API 1631; NLPA 631; KWA Recommended Practice for inspecting via video camera (if allowed in your state)</li> <li>• For CP testing/inspections: NACE TM0101, TM0497, RP0285, RP0169</li> </ul>	
I. Spill Prevention	<p><i>NOTE:</i> Spill prevention is <u>not</u> required for USTs in proper temporary closure or that never receive deliveries &gt;25 gallons</p>	
	<p>Verify the following:</p> <ul style="list-style-type: none"> <li>• The spill bucket is present</li> <li>• The spill bucket does not have any holes or cracks</li> <li>• The drain mechanism is not broken or impaired by debris</li> </ul>	1
II. Overfill Prevention	<p><i>NOTE:</i> Overfill prevention is <u>not</u> required for USTs in proper temporary closure or that never receive deliveries &gt;25 gallons</p>	
	<p>Identify the delivery method:</p> <ul style="list-style-type: none"> <li>• Gravity</li> <li>• Metered flow</li> </ul>	2
	<p>Compare delivery record’s quantities to ullage at time of product delivery</p>	2
	<p>Identify the overfill prevention method used:</p> <p>FLAPPER VALVE – automatically shuts off the delivery when the tank is 95% full or before fittings on top of the tank are exposed to fuel</p> <ul style="list-style-type: none"> <li>• Verify presence by installation records, contractor verification, or field observation</li> <li>• Verify the flapper valve has not been tampered with to inhibit or modify the shut-off point (e.g., stick in drop tube)</li> </ul>	2
	<p>AUDIBLE OR VISIBLE ALARM – when tank 90% full or 1 minute before being overfilled</p> <ul style="list-style-type: none"> <li>• Test alarm to verify it is functional</li> <li>• Driver can see or hear alarm at point of transfer</li> </ul>	2

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II. Overfill Prevention (Continued)	<b>BALL FLOAT VALVE</b> – restricts product flow when tank 90% full or 30 minutes before being overfilled <ul style="list-style-type: none"> <li>• Verify presence by installation records, contractor verification, or field observation</li> <li>• Ball must not be floating in tank</li> <li>• Verify that appropriate device is being used (e.g., ball float valve inappropriate with some Stage I vapor recovery systems and suction piping systems)</li> </ul>	2
III. a. Operation and Maintenance	This item addresses structural repairs to tanks and piping <ul style="list-style-type: none"> <li>• Precision testing is required within 30 days of the repair; or</li> <li>• The system is internally inspected after the repair; or</li> <li>• The system is being monitored for releases using a monthly monitoring method [280.43(d) thru 280.43(h); or</li> <li>• The system is tested using another approved method.</li> </ul>	3
III. b. Operation and Maintenance of Corrosion Protection	<i>NOTE:</i> Corrosion protection must be maintained on UST's in temporary closure. This includes recording rectifier readings and performing the periodic CP test and internal lining inspections.	
	For each UST system, identify the following: <ul style="list-style-type: none"> <li>• Installation date</li> <li>• Corrosion protection method used</li> <li>• Tank status: in operation or in temporary closure</li> <li>• Tank, line and buried component material</li> <li>• Date of repairs to tanks/lines/buried components</li> </ul>	5
	<b>CATHODIC PROTECTION – IMPRESSED CURRENT</b> <ul style="list-style-type: none"> <li>• Verify the rectifier is operational</li> <li>• Verify rectifier's electrical source provides power 24/7</li> <li>• Verify that rectifier readings were recorded every 60 days for the past 6 months</li> <li>• Look at clock in rectifier box to determine if rectifier has been turned off or without power longer than 60 days. Even if the clock has been turned off, the inspector can work backwards to the inspection date and calculate a reasonable estimate of what the clock hours should be.</li> <li>• Verify that the CP system was tested within the last 3 years</li> <li>• Verify that the most recent CP system test showed corrosion protection was adequate (for example, meets - 850 mV instant off or 100 mV polarization criterion) and that any non-passing results were promptly investigated and corrected to achieve a passing result</li> <li>• Look at tightness test records to verify tanks and piping were tightness tested within 30 days of repair completion (not required for tank using monthly monitoring)</li> <li>• Verify CP system was tested within 6 months of repair to the CP system</li> </ul>	4,5,6

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Regulatory Subject Area	Hints/Inspection Tips	Corresponding Release Prevention Measure #
<b>III. b. Operation and Maintenance of Corrosion Protection (Continued)</b>	<b>CATHODIC PROTECTION – IMPRESSED CURRENT (CONTINUED)</b> <ul style="list-style-type: none"> <li>• Verify that metal connections at tank and dispenser are contained, cathodically protected, or not in contact with the soil or other electrolyte</li> <li>• Verify CP system was tested within 6 months of repair to the CP</li> </ul>	
	<b>Galvanic Protection - Anodes</b> <ul style="list-style-type: none"> <li>• Verify that CP system was tested within 6 months of repair to CP</li> <li>• Verify that the most recent CP system test showed corrosion protection was adequate (-850 mV) and that any non-passing results were promptly investigated and corrected to achieve a passing result</li> <li>• Look at tightness test records to verify tanks and piping were tightness tested within 30 days of repair completion (not required for tank using monthly monitoring)</li> <li>• Verify CP systems were tested within 6 months of repair to the CP system</li> <li>• Verify that metal connections at tank and dispenser are contained, cathodically protected, or not in contact with the soil or other electrolyte</li> </ul>	4,5
	<b>INTERNAL LINING (applies to tank only)</b> <ul style="list-style-type: none"> <li>• Verify that the internal lining was inspected in a timely manner (within 10 years after installation, every 5 years thereafter)</li> <li>• Verify that the internal lining was inspected by a procedure acceptable to the jurisdiction (some states do not accept inspection by video camera)</li> <li>• Verify that the tank passed the internal lining inspection or that <u>one</u> of the following was done: (see API 1631) <ul style="list-style-type: none"> <li>• Lining repaired</li> <li>• Cathodic protection system installed (if tank's metal thickness is 75% original thickness)</li> <li>• Tank permanently closed</li> </ul> </li> <li>• Verify that metal connections at tank and dispenser are cathodically protected, or not in contact with the soil or other electrolyte</li> </ul>	7

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IV. Tank and Piping Corrosion Protection	<b>DEFINITIONS:</b> <ul style="list-style-type: none"> <li>New USTs: installation began after 12-22-88</li> <li>Existing UST's: installation began on or before 12-22-88</li> </ul>	
	FRP tanks and piping satisfy the corrosion protection requirements. However, the inspector should still verify that any metal connections are either cathodically protected or not in contact with the soil or other electrolyte.	8
	Verify records are available to document <u>one</u> of the following: <ul style="list-style-type: none"> <li>Buried tank, piping, and all fittings/connections are protected against corrosion; or</li> <li>CP is not necessary</li> </ul>	8